

MAR 13 2008

Nalco Docket No.: 7560-NES
Customer No. 000049459

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REMARKS

This is in reply to the Office Action mailed on December 14, 2007 ("Office Action").

Claims 3-14, 16-40, 42-53 and 55-63 are currently pending.

Claims 42-46, 47-53 and 55-60 are allowed.

Claims 37-40 are objected to as being dependent on a rejected base claim.

Claims 3-4, 6-14, 16-26, 47, 53 and 63 are rejected under 35 U.S.C. § 112, second paragraph.

Claims 3, 5-10, 16, 18-23 and 61-63 are rejected under 35 U.S.C. § 102(b) over U.S.

5,324,404 ("Ott").

Claims 6-10, 18-23 and 27-36 are rejected under 35 U.S.C. § 103(a) over U.S. 5,324,404 ("Ott").

Claim 28 is amended to particularly point out and distinctly claim subject matter which

Applicant regards as his invention.

Claims 31 and 62 are drafted in independent format.

Claim 3 is cancelled and its subject matter incorporated into claim 62.

Claims 29 and 32 are cancelled and their subject matter incorporated into claim 28.

Claims 30, 33 and 35 are amended to maintain proper claim dependency.

No new matter is added by this amendment.

Nalco Docket No.: 7560-NES
Customer No. 000049459

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DISCUSSION

Claim Interpretation

Applicant agrees with the Examiner that the claims are drafted in product by process format. Applicant respectfully disagrees, however, with the Examiner's assertion that claims 61-63 employ open comprising language defining the amine-containing monomer such that the claims are open to more than the recited amine compounds.

Claim 61 is reproduced below (emphasis added). Claims 63 and amended claim 62 are similar.

61. (currently amended) A demulsifier composition comprising oligo-and polymeric compounds comprising terminal epoxide groups, wherein said oligo-and polymeric compounds are *selected from the group consisting of* reaction products of an epoxide or glycidyl compound, or a mixture thereof, said epoxide or glycidyl compound *selected from the group consisting of* aliphatic or cycloaliphatic compounds having two reactive epoxide groups and about 0.8 to about 1.3 molar equivalents of an amine having only two reactive amino hydrogens *selected from the group consisting of* 2-(2-aminoethoxy) ethanol and tris(hydroxymethyl)aminomethane and mixtures thereof.

Applicant respectfully asserts that "comprising" in claim 61, 62 and 63, line 1 refers to the composition, which may include components other than the recited oligo-and polymeric compounds. Applicant has, however, used closed "consisting of" language with regard to the individual reactants used to prepare the oligo-and polymeric compounds. Therefore, Applicant respectfully asserts that the clear language of claims 61-63 excludes the presence of additional, or different amine-containing monomers, epoxides and glycidyl compounds from the reactants used to prepare the polymers and accordingly excludes oligo-and polymeric compounds other than those prepared from the recited amine-containing monomers, epoxides and glycidyl compounds. With respect to obvious reactants, Applicant again respectfully asserts that any disclosure in the cited reference, which concerns grinding aids, is irrelevant to the claimed subject matter.

Nalco Docket No.: 7560-NES
Customer No. 000049459

OFFICIAL

The Rejections under 35 U.S.C. § 112, Second Paragraph

Claims 3, 4, 6-14, 16-26, 47, 53 and 63 are rejected under 35 U.S.C. § 112, second paragraph. In reply to Applicants argument that capped polymers are readily distinguished from the uncapped version, both structurally and by the method of preparation, the Examiner states:

14. Applicants (page 16) indicate the terminal epoxides are sometimes capped with the monomeric amines. This is the basis of the rejection, The composition has not been adequately defined in the claim to determine the metes and bounds of the claimed subject matter. Applicant's refer to the specification at page 10 and the examples. Said reference amounts to reading limitation into the claims that are not otherwise present.

Office Action at page 7.

Applicant respectfully traverses this rejection.

Claim 3 is cancelled, rendering the rejection of this claim moot.

As discussed in detail in Applicant's Amendment and Reply dated September 10, 2007 Applicant respectfully asserts that claims 61, 62 and 63, from which claims 4, 6-14, 16-26, 47 and 53 ultimately depend recite an oligo- and polymeric reaction product comprising terminal epoxide groups which may be capped by subsequent reaction of the terminal epoxide groups with a capping monomer.

Applicant respectfully asserts that this adequately defines and sets out the meets and bounds of the claimed subject matter. While in some instances the capping amine may be the same as the amine containing only two reactive amino hydrogens which is incorporated in the polymer backbone, the difference is that the capping monomer is added after the polymerization reaction. Thus, the difference between processes where an amine is added during polymerization and processes where a second portion of amine, or a different amine is added subsequent to polymerization, i.e. processes that require a second step, is clearly set forth. Structurally, the uncapped oligo- and polymeric compounds contain terminal epoxide groups while the capped compounds, prepared by the subsequent reaction with the formed polymer, do not. Therefore, Applicant respectfully asserts capped and uncapped polymers are readily distinguishable, both structurally and by their method of preparation and further that this is clearly set out in the claims.

Nalco Docket No.: 7560-NES
Customer No. 000049459

OFFICIAL

Accordingly, Applicant respectfully asserts that claims 4, 6-14, 16-26, 47, 53 and 63, when read in light of the specification and claims 61-63 particularly point out and distinctly claim the subject matter of the invention. Accordingly, Applicant respectfully requests withdrawal of the rejection of claims 4, 6-14, 16-26, 47, 53 and 63 under 35 U.S.C. § 112, second paragraph.

The Rejection of Claims 3, 5-10, 16, 18-23 and 60-63 under 35 U.S.C. § 102(b) over U.S. 5,324,404

Claims 3, 5-10, 16, 18-23 and 60-63 are rejected under 35 U.S.C. § 102(b) over U.S. 5,324,404 ("Ott"). In reply to Applicants arguments in the reply dated September 10, 2007 that Ott discloses different a different composition, the Examiner states:

13. Applicants (page 18) assert that the new claims, claims 61-63, exclude resins comprising an aromatic group in the backbone. This has not been deemed persuasive for the following reasons. Initially, (1) the claims are drafted in product-by-process format and do not set forth any structure. (2) The claims employ open transitional language, i.e., "comprising", which is open to elements of the claims that are not explicitly set forth in the claim. Since the Ott reference discloses both the epoxide or glycidyl compounds of aliphatic compounds and aromatic compounds, applicants amended new claims are not deemed to exclude the materials of the Ott reference.

Ott (column 4, lines 54) specifically teach diglycidyl ethers of polyalkylene ethers. The claims do not exclude aromatic compounds by the open transitional language. This is self-evident upon review of the claims and the further additional capping monomer clearly contemplated by applicants.

Office Action at pages 7-8.

Applicant respectfully traverses this rejection.

Applicant respectfully asserts that claims 61-63 expressly recite oligo- and polymeric polymeric reaction products selected from the group consisting of reaction products of an epoxide or glycidyl compound, or a mixture thereof, where the epoxide or glycidyl compound is selected from the group consisting of aliphatic or cycloaliphatic compounds. See also, discussion above regarding claim interpretation.

As all of the grinding resins of Ott incorporate diglycidyl ether of bisphenol A, an aromatic component expressly excluded from the claimed polymers, Applicant respectfully asserts that claims 61-63, and claims 5-10, 16, 18-23 which depend therefrom are novel over Ott and therefore respectfully requests withdrawal of the rejection under 35 U.S.C. § 102(b) over Ott.

Nalco Docket No.: 7560-NES
Customer No. 000049459

OFFICIAL

The Rejection of Claims 6-10, 18-23 and 27-36 under 35 U.S.C. § 103(a) over U.S. 5,324,404

Claims 6-10, 18-23 and 27-36 are rejected under 35 U.S.C. § 103(a) over U.S. 5,324,404 ("Ott") for the reasons set forth in the previous Office Action.

Applicant respectfully traverses this rejection.

As discussed above, claims 61-63 expressly exclude the incorporation of glycidyl ethers of polyphenols as required in all instances by Ott.

As noted previously, Applicant cannot locate any disclosure in Ott relating to capping monomers or N-alkylating agents.

Applicant further respectfully asserts that nothing in Ott, which concerns grinding aids, teaches or suggests preparing a polymer useful as a demulsifier and which does not incorporate glycidyl ethers of polyphenols and which does incorporate the claimed combination of aliphatic or cycloaliphatic diglycidyl ethers, amines containing only two reactive hydrogen atoms, capping monomers and/or N-alkylating agents and the claimed reaction sequence. Applicant therefore respectfully requests withdrawal of the rejection of claims 6-10, 18-23 and 27-36 under 35 U.S.C. § 103(a).

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Nalco Docket No.: 7560-NES
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CONCLUSION

Applicant respectfully request entry of this clarifying amendment and withdrawal of the rejections under 35 U.S.C. §§ 112, second paragraph, 102(b) and 103(a) and respectfully assert that this application is in condition for allowance. Early notice to this effect is earnestly solicited.

Respectfully submitted,



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